



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,650	02/22/2002	Frank Gottwald	10191/2199	8172

26646 7590 10/23/2002

KENYON & KENYON  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

ALSOMIRI, ISAM A

ART UNIT	PAPER NUMBER
----------	--------------

3662

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/080,650

Applicant(s)

GOTTWALD ET AL.

Examiner

Isam A Alsomiri

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hinckley Jr. Referring to claims 1 and 17, Hinckley discloses in figure 1 transmitting signals with a carrier frequency, transmitting the signals as pulsed signals with a pulse repetition frequency, and varying the pulse repetition frequency during operation of the radar device (see Abstract).**

**Referring to claims 3 and 19, Hinckley teaches varying the pulse repetition frequency, and using a software waveform control algorithm to vary the pulse repetition frequency. The criteria for selecting a pulse repetition frequency depends on the application, which reads on the claimed the pulse repetition frequency is varied deterministically (see Abstract, and col. 3 lines 57-67).**

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3662

**Claims 4 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinckley Jr. in view of Alitz.** Hinckley does not teach varying the pulse repetition frequency chaotically, Alitz teaches utilizing random pulse repetition frequency, which reads on the claimed varying chaotically (see Abstract). It would have been obvious to modify Hinckley's system to vary the pulse repetition frequency chaotically to eliminate the possibility of interference from other devices in close proximity.

**Claims 2, 5-6, 9-11, 13-14, 18, 21, 24-26, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinckley Jr. in view of Emi.** Referring to claims 2, 9-10, 18, and 24-25, Hinckley discloses in figure 1 transmitting signals with a carrier frequency, transmitting the signals as pulsed signals with a pulse repetition frequency, and varying the pulse repetition frequency during operation of the radar device (see Abstract). Hinckley does not teach varying the carrier frequency during operation of the radar, Emi teaches changing a carrier frequency during operation (see Abstract, and col. 5 lines 2-6). It would have been obvious to modify Hinckley's system to further include varying the carrier frequency to suppress interference from other devices and reduce false alarms.

Art Unit: 3662

**Referring to claims 11 and 26**, Hinckley teaches varying the pulse repetition frequency, and using a software waveform control algorithm to vary the pulse repetition frequency. The criteria for selecting a pulse repetition frequency depends on the application, which reads on the claimed the pulse repetition frequency is varied deterministically (see Abstract, and col. 3 lines 57-67).

**Referring to claims 5, 13, 21, 28**, Emi teaches changing the carrier frequency by phase modulation (see col. 4 line 65 – col. 5 line 6).

**Referring to claims 6 and 14**, Emi teaches changing the carrier frequency (see col. 4 lines 65 – col. 5 line 6), Emi teaches signals can be transmitted by frequency modulation (see col. 2 lines 56-60). Therefore, it would have been obvious to change the carrier frequency by (FM) frequency modulation because it is know and only requires the knowledge of one skilled in the art.

**Claims 12 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinckley Jr. in view of Emi and Alitz.** Hinckley does not teach varying the pulse repetition frequency chaotically, Alitz teaches utilizing random pulse repetition frequency, which reads on the claimed varying chaotically (see Abstract). It would have been obvious to modify Hinckley's system to vary the pulse repetition frequency chaotically to eliminate the possibility of interference from other devices in close proximity.

**Claims 7-8, 15-16, 22-23, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinckley Jr. in view of Emi and Charlot. Referring to claims 7, 15, 22,**

Art Unit: 3662

**and 29**, Hinckley does not teach varying the carrier frequency during operation of the radar, Emi teaches changing a carrier frequency during operation (see Abstract, and col. 5 lines 2-6), Emi teaches signals can be transmitted by frequency modulation (see col. 2 lines 56-60). It would have been obvious to modify Hinckley's system to further include varying the carrier frequency by (FM) frequency modulation to suppress interference from other devices and reduce false alarms. Hinckley teaches producing an intermediate frequency, Hinckley does not teach a virtual intermediate frequency by mixing the received signal and modulated carrier frequency, Charlet teaches a virtual intermediate frequency by mixing the received signal and the modulated carrier frequency (see figure 1, Abstract). It would have been obvious to modify Hinckley's system to further include the virtual intermediate frequency to extract the desired signal spectrum for analyzing.

**Referring to claims 8, 16, 23, and 30**, the combination of Hinckley and Emi teaches varying the carrier frequency as mentioned above. The combination does not teach varying the carrier frequency by a sudden frequency change method, Charlot teaches randomly changing the carrier frequency, which reads on the claimed varying the carrier frequency by a sudden frequency change method (see col. 1 lines 15-26). It would have been obvious to modify the combination of Hinckley and Emi to further include changing the carrier frequency by a sudden change method to minimize the interference and the distortions.

Art Unit: 3662

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pezzlo et al. is cited to show varying the carrier frequency by a random changing method using a pseudo-random code.

Sakuma et al. is cited to show varying the frequency of the carrier signal using PLL circuit.

Longuemare, Jr. is cited to show virtual intermediate frequency by mixing the received signal with the modulated signal.

Cross et al. is cited to show a pulse Doppler radar utilizing rapidly changing pulse repetition frequency.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-9326 for regular communications and 703-305-9327 for After Final communications.

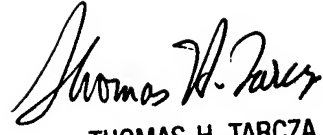
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Art Unit: 3662

Isam Alsomiri



October 20, 2002



THOMAS H. TARCZA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600